

Notice of Allowability

Application No.

10/806,036

Examiner

Michael Bernshteyn

Applicant(s)

ZHANG ET AL.

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 06/09/2006.
2. ☒ The allowed claim(s) is/are 63-76 and 83-111.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

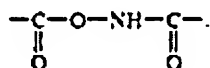
1. This Office Action is a response to the remarks filed June 9, 2006. Applicants have cancelled claims 28-62 and 77-82 without prejudice; claim 63 was amended; claims 85-111 were added. Applicants confirmed the election of the following species: 2-hydroxyethyl acrylate for claims 65, 72 and 73; and 2-hydroxyethyl acrylate and acrylic acid for claim 76.
2. In view of the Amendment the rejection of the claims 63-76 under 35 USC 112, 2nd paragraph has been withdrawn.
3. Claims 63-76 and 83-111 are now pending.

Allowable Subject Matter

4. Claims 63-76 and 83-111 are allowed.
5. The following is an examiner's statement of reason for allowance:

The present claims are allowable over the closest references: Ulbrinch et al. (U.S. Patent 5,124,421) and Brooks et al. (4,160,077).

Ulbrinch discloses the solution pertains to hydrolytically degradable hydrophilic gels consisting of the individual chains of hydrophilic polymer interconnected with crosslinks containing the structure:

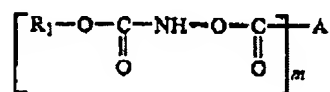


The method for preparation of the hydrolytically degradable gels consists in subjecting hydrophilic monomers or their mixture to the radical polymerization or copolymerization, or to copolymerization with hydrophobic monomers, in the presence of a new compound--N,O-dimethacryloylhydroxylamine--as a crosslinking agent, and, if desired, in the presence of a solvent, whereas the amount of hydrophilic monomers is 50 to 99.8 molar percent related to all monomers present (abstract, col1, lines 56-63). As the hydrophilic monomers for the preparation of hydrolytically degradable polymeric gels according to the invention, they can be advantageously used the monomers selected from the group comprising N-(2-hydroxypropyl)methacrylamide, N-isopropylacrylamide, N,N'-diethylacrylamide, N-ethylmethacrylamide, 2-hydroxyethyl methacrylate, 2-(2-hydroxyethoxy)ethyl methacrylate, acrylic acid, methacrylic acid, and others. The hydrophilic monomers can be used in the crosslinking homopolymerization in the amount of 90 to 99.8 weight percent of the polymerization mixture and, in the copolymerization with hydrophobic comonomers, in the amount of 50 to 99 molar percent related to all monomers in the polymerization mixture (col. 1, line 56 through col. 2, line 8).

Ulbrinch does not disclose the instantly claimed mono-, bis- and higher N,O-diacylated hydroxylamines and methods for their preparing. Therefore the instantly claimed crosslinked gels and methods for the preparation of such compounds are patentable over teachings of Unbrinch.

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Brooks discloses a process for the cross-linking or chain extension of hydrocarbon polymers, which contain ethylenically unsaturated groups, which comprises forming an intimate mixture of the polymer with a carbamate of the formula:



wherein R_1 is an optionally substituted hydrocarbyl radical, m is an integer, and A is H or an optionally substituted hydrocarbyl radical of valency m , and subjecting the mixture to heat (abstract).

Brooks discloses N,O-diacylated hydroxylamines and their use in crosslinking unsaturated hydrocarbon polymers (col. 1, line 48 through col. 2, line 23). Brooks does not disclose the instant variable group Q.

Therefore, the instantly claimed crosslinked gels and methods for the preparation of claimed compounds are patentable over teachings of Brooks.

6. As of the date of this Notice of Allowability, the Examiner has not located or identified any reference that can be used singularly or in combination with another reference including Mandeville to render the present invention anticipated or obvious to one of ordinary skill in the art.

7. In the light of the above discussion, it is evident as to why the present claims are patentable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delay, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reason for Allowance".

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Bernshteyn whose telephone number is 571-272-2411. The examiner can normally be reached on M-F 8-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Bernshteyn
Patent Examiner
Art Unit 1713

MB
06/28/2006


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